The
Ballarat Naturalist

June 2008

Trailing Goodenia
Goodenia lanata
(Club Logo)

RBG Australian Garden Cranbourne Excursion.

Banksia sp.

Dry River Bed

The ringing sound of Bellbirds greeted us when we alighted from the bus at the car park of the Royal Botanic Gardens Cranbourne, south-east of Melbourne. This garden is a division of the Royal Botanic Gardens Melbourne and is devoted to the growing of Australian plants. After an early lunch we made our way along a pathway bordered with sheoks to the entrance building.

We had arranged a guided tour, and our tour guide Andrew told us the history of the area in which the garden is situated. The gardens themselves occupy a small portion of 363 hectares of mostly untouched heathlands, wetlands and woodland. In the 1880's the army had control of the area. From 1920 sand was extracted from several areas. The gardens in their present form were opened to the public in 2006. Andrew said the botanic gardens usually have a main feature, often a lake or building, around which the garden beds are situated. At this garden the main feature is the Red Sand Garden. Here is a large expanse of red sand bordered on one side with lunettes and a sandhill covered with mass plantings of *Acacia binerva* and *Spinifex sericeus*. Clumps of saltbush dotted the flat area of the sand plain.

We then inspected the five exhibition gardens. The first one featured the diversity of Australian plants. Andrew shows a map of the 83 bioregions in the Australian landscape. On an area of sloping ground narrow rectangular beds were laid out. On each bed, plants from a particular bioregion of Australia were planted. It must take some horticultural skill to successfully grow plants from very different environments to the one at Cranbourne.

Another exhibition garden highlighted water conservation. This garden was divided into three terraces with three distinct watering regimes. Another garden was called the Future Garden. Growing in this garden were plants produced by various techniques such as grafting, hybridisation, and the development of cultivars, and plant bioengineering. All these techniques seek to alter the naturally occurring form of a plant. The Home Garden comprises fragments of different gardens covering a variety of periods and styles. By substituting the exotic plants used in many gardens with native plants, it is possible to use native plants in established and new gardens to achieve many different results.

Alongside these gardens was the Rockpool Waterway along which water flowed down over large pebbles and areas, where square blocks of raised concrete created interesting patterns of water flow. The rate of water flow was manipulated every 25 minutes to simulate the varying flow rates in most Australian rivers. A large steel sculpture bordered one side of the stream. The cliff like structure was made of 'Corten' steel, the surface layer of which when left unpainted, rusts to a dark red brown colour.

Later on our tour we looked at an area called the Dry River Bed. Its design relates to the ephemeral nature of water in the Australian landscape and the power of water to shape the land into riverbeds on a seasonal basis. The central Australian landscape has these rivers. On the surface of dry rivers beds, plants respond by growing in the bars of sand that are shaped in curvilinear forms. These forms are reflected in the patterns of the Dry River Bed.

The last area of our tour was the Eucalyptus Walk. The main groups of Eucalypts featured here included the Stringybarks, Box trees, Peppermints and Ironbarks. This group of eucalypts all have persistent bark and therefore more easily to manage in a garden. Also in this area were transplanted a variety of *Xanthorrhoeas*, even some rescued from WA mine sites. Smaller plants included the brilliant orange flowers of *Banksia burdettii*, the perfumed *Boronia metastigma* and the native Jasminum suavissimum. *Correa decumbens* and a form of *Acacia fimbriata* were used as hedge plants.

With over 10,000 plants, the gardens have a huge variety on display. The plants looked healthy and paths and buildings well maintained. It will be interesting to revisit the gardens in a few to see the young trees and plants when they are mature. Thanks are due to Peter and Claire Dalman for organising the trip. It was good as passengers to rely on Peter's driving and navigating skills through Melbourne and have Claire point out interesting buildings along the way.

Les Hanrahan

Diversity Garden

The Red Sand Garden

A Comparison of the Ecology of Southern Africa and Southern Australia

Speaker: Dr. Graeme Ambrose, Environmental Management Co-ordinator, School of Science and Engineering, University of Ballarat.

In January 2007 four members of Graeme's department visited Namibia and South Africa, aided by a grant received as a result of the department's being highly ranked for its teaching. A staff member originally from Namibia wished to develop links between the Polytechnic of Namibia, and the two institutes signed a Memorandum of Understanding. The universities of Cape Town and Stellenbosch were also visited with a view to establishing student exchanges. A number of national parks were on the itinerary and the four members were introduced to management situations unique to Africa such as the conflict between conservation and the needs of local people for bushmeat.

Graeme took a large number of photographs and compiled them in such a way as to illustrate the similarities and differences between the fauna and flora of the two continents, relating them to the ancient Gondwana continent to which both southern Africa and Australia belonged. He was not averse to inserting some humorous cartoons to illustrate his points and the audience responded accordingly!

Ecological regions visited by Graeme included:

Fynbos (fine bush) – comparable to our heathlands, this zone occurs in the west and south-western Cape of South Africa. Characterised by low nutrient soils, it supports *Ericas*, *Proteas,* and *Leucoadendrons* (all Gondwanan families) on which Sunbirds (with brush tongues like our honeyeaters) feed.

Veldt – grasslands whose species include *Themeda* – kangaroo grass.

Thornveldt –typically thorny Acacias and other shrubs.

Fog Desert – Parallel rows of sand-dunes run along the coast of Namibia where the cold current running northwards from the Southern Ocean chills the air, causing the vapour to condense to form fog; the droplets provide the only moisture - < 23mm annually - for flora and fauna in the Namib Desert.

A variety of flora and fauna images appeared before us, comparing and contrasting creatures and vegetation of the same families but different species, or totally different genera

and species, or species which have been introduced from one continent to the other. Blue Gums planted in Southern Africa for timber and shade are now home to the Lesser Masked Weaver which produces a nest of intertwined grasses; the Cape Glossy Starling and Rosy-faced Lovebirds are clearly related to our families, but parrots are not dominant there as in Australia.

We share members of a lizard family – the *Agamidae* which in S.A includes Tree and Rock Lizards and here includes the Frill-necked Lizard. Dung beetles from S.A. have been introduced to Australia in an effort to break down cow manure and thus reduce the number of flies which torment us.

Amongst the grazers and browsers – we have various kangaroos and wallabies - they have Mountain Zebra (ID'd by the stripe pattern), Wildebeest (aka Gnu), and Giraffe which can feed on extremely thorny acacias; Greater Kudu (aka Gemsbok), Oryx, Bontebok and Springbok are just some of a huge variety of antelope-type grazers, and are thus a very successful group. Our large grazers died out – the megafauna such as Diprotodontids the size of Hippos became extinct, whether due to climate change or hunting by native peoples.

S.A. has the Ostrich, we have the Emu and Cassowary (South America has the Rhea, New Zealand had the Moa), all flightless birds. Guineafowl and Flamingos thrive in S.A but the latter are found only as fossils, succumbing as Australia's climate dried out as the continent moved towards the equator after separating from Gondwana. Finches, such as the Melba Finch and Violet-eared Waxbill occupy the same ecological niche - seed eaters - in both areas. Nectar-bearing blossoms which are tubular can be accessed by birds with slender elongated bills such as the Malachite, Orange-breasted, and Scarlet-chested Sunbirds; can they digest pollen and so access protein, or, like our honeyeaters must they also eat insects to obtain protein?

Birds pollinate the Aloes, Proteas, Red-hot Pokers; in Stellenbosch Botanical Gardens Graeme saw the Speckled Pigeon and Red-winged Starling, all related to our genera, but what we don't have are the various Hoopoes and Hornbills, or the White-breasted Mousebird.

African Hoopoe

There is no equivalent in Australia for the many Weaver bird species such as the White-browed Sparrow Weaver and the Sociable Weaver – the latter build huge colonies, great masses of intertwined vegetation taking up large parts of a tree.

The Quiver Tree, *Aloe dichotoma* is spectacular in shape, each branch dividing into two, hence its specific name. Growing up to 7 metres high, its white trunk helps to reflect light and heat. The Bushmen used its soft pith to make quivers.

The Welwitschia *Welwitschia mirabilis* is unique, a plant in the desert consisting of only two leaves which grow continuously from the central trunk and may be hundreds of years old – though getting pretty tatty at the ends! It has male and female plants, and botanically seems to be intermediate between conifers and flowering plants.

Quiver Tree

Welwitschia

Acacias are used for lounging by leopards which drape themselves over horizontal branches; in Australia our fierce mammals/marsupials, megafauna like *Thylacoleo carnifex*, became extinct around 30,000 years ago. Tree Rat nests will be found in the hollows there as will Hornbill nests. However Australia has no woodpeckers so creatures requiring hollows must rely on wood rotting, or spouts where branches have broken off.

Thus ended a talk both humorous and revealing which drew together the links between these two former sections of Gondwana. Clearly major extinction events have occurred since Gondwana broke up, but it is fascinating to note which families have survived over the intervening millennia.

Carol Hall.

Of Empty Lakes and Fairy Grass

Winter approaches and as I write this in early May 2008 our local lakes are all still dry and our water storages are very low at just over 7%. Our lakes were dry last year too, but lake Wendouree looks quite different from this time last year. This year it resembles a grassy paddock unlike last year's cracked earth with weeds and plants scattered over the bare dirt. Then the novelty meant that people walked across, even ran races across the "lake". We noted dried eels, peered inside spider festooned artificial nest boxes, gathered rubbish and lost objects, watched big machines dig and move earth and generally viewed the shore from the centre instead of the other way round.

As summer receded and shallow water spread across the lake for a time, birds found the paradise and came in their thousands. Bird watching was excellent both in numbers and variety with reports of 68 different species being observed in a single day. Thousands of grey teal visited but so too did rarer birds including fairly large flocks of freckled ducks and an occasional brolga.

Gradually the water and birds went and grass grew. Green grass matured. Seed heads dried, detached and dispersed. Problem. Many problems. Fairy grass – Lachnagrostis filiformis which has for several years plagued Learmonth and Burrumbeet residents, began to annoy Wendouree residents. Soon it built up along fences, smothering gardens, blocking gates and doorways, collecting in spouting and spreading. On windy days the Wendouree shops had grass swirling in doorways; we had some in our yard a few kilometres

from the lake, and doubtless it caused nuisance other than noted. Lake Wendouree was mown several times; trucks vacuumed properties and collected gathered piles of fairy grass. Burning was considered inappropriate for Lake Wendouree as were other idea such as poisoning, so for a couple of months, residents, motorists and businesses just had to endure the fairy grass. It is a native species. Lake Burrumbeet was burnt to reduce the frustration. This was more difficult and slower than I expected, even aided by aerial incendiary bombing, but after two days improvement occurred. The track behind the racecourse was spectacularly obliterated and the caravan park had been seriously inconvenienced. Grass clung to fences and trees along the Western Highway and tumbled along the road. Last year Lake Learmonth was burnt but not before the townspeople had become thoroughly annoyed by impassable roads and driveways, smothered bowling greens and sports fields, and the endless gathering, bagging and disposal of the huge heaps of seed heads. Names much less pleasant than "fairy" grass have been suggested by exasperated district residents. The solution? Rain, rain and more rain. Bring back our lakes, we miss them!.

Claire Dalman

FIELD NATURALISTS CLUB OF BALLARAT INC

A0014919P ABN 13 150 403 135

MINUTES OF GENERAL MEETING 2 MAY 2008

Opening and Apologies The President welcomed 22 members & visitors.
Apologies: John Gregurke, Greg Binns, Anna Baulch, Chris Baulch, Ken Hammond.

Minutes of previous meeting Tabled and Summarised in Ballarat Naturalist.

Correspondence

IN:

- Royal Botanic Gardens: Booking confirmation and payment request.
- Bendigo Field Naturalists Club: Whirrakee, April 2008 .
- Bernadette Cincotta: Land and Biodiversity Green Paper meeting dates.
- Bernadette Cincotta: Brush-tailed Rock Wallaby forum – Grampians
- Bernadette Cincotta: 2008 Victorian Landcare Forum – Creswick
- Bush Heritage Aust: Newsletter and funding request letter.
- Parks Victoria: Comments on Draft Plans for Great Otway Park and Forest plus CD.
- City of Ballarat: Invitation to Regional Achievement and Community Awards –
- City of Ballarat: Withdrawal of Sago Hill Extractive Industry planning permit application.
- University of Ballarat: Account for use of Horticulture Centre - $165
- Field Nats News No 175, May 2008 – Write up of Naracoorte camp, list of May excursions.
- Australian Conservation Foundation: Letter – purpose unclear.
- City of Ballarat: Re Ballarat Planning Scheme Amendment C95 and C102
- Erica Nathan: Invitation to attend Lal Lal Falls Field Naturalists walk re-enactment and pamphlets about same.
- Hamilton Field Naturalists Club: Invitation to join them at its 50th anniversary celebration on the weekend of Sat 23rd and Sun 24th August 2008. Contact: Diane Luhrs
- Victorian National Parks Assn: Concern at habitat loss and proforma response to Land and Biodiversity at a time of Climate Change Green paper. Paper at www.dse.vic.gov.au/landwhitepaper Submission deadline Mon 30th June 2008

- Field Naturalists Club of Victoria: Early notification of 2008 Biodiversity Symposium: "Birds and the Urban Environment" Sunday 14th Sept. plus brochure of club activities and membership appln.
- Bernadette Cincotta: Frogs of the Glenelg Hopkins region CD.

OUT:

- Incorporation return.

Business arising from correspondence:

- Committee approved payment of University of Ballarat room rental.
- Lal Lal to Moorabool Falls walk: Sun. May 25th. Starts 11am Lal Lal Falls picnic area.

Reports

Treasurer's Report: *Opening Balance* $4155.24, *Income*: $468.00 (Subscriptions: $390, Market Table: $18, Ballarat Book: $10, Cool Stores donation: $50), *Expenses*: $64.65 (Guest speaker $9.15, Newsletter and syllabus cards: $55.50), *Closing Balance*: $4558.59. M: Les Hanrahan S: Tony Johns

General Business

Newsletters: Fran has sorted collection and identified duplicates. Duplicates available for members to take.

SEANA camp at Healesville 17 – 19 October. Information now on SEANA website.

Field Reports

- Graeme Ambrose: Flock of up to 12 Rainbow Lorikeets in Winter Street Buninyong Blue gums second and third weeks of April. Only seen once before in Buninyong in late 2007.
- Gavin Cerini: 4 sulphur crested cockatoos in Eyre St. on 29th April.
- Gavin Cerini: Flock of long billed corellas flying over Dana Street on 2 May.
- Del McDonnell: At Creswick, 8 species of birds in 10 minutes at birdbath including 10 red –browed firetails on 28th April.
- Amelia Hinton: Five yellow tailed black cockatoos flying at Nerrina wetland on 29th April.
- Amelia Hinton: Three yellow tailed black cockatoos flying at Sovereign Hill on 30th April.
- Helen Burgess: Grey Currawongs at Moola Street gave their 'rain call' and it rained the next day after a long dry period.
- Carol Hall: Stubble quail seen on Lake Wendouree from January.

Syllabus Item

Dr Graeme Ambrose – 'Environmental Management Co-ordinator, School of Science and Engineering, University of Ballarat spoke on 'A comparison of the ecology of Southern Africa and Southern Australia". Peter Dalman thanked Graeme for his talk.

Supper

CALENDAR 2008

June

Fri 6	Carol Hall—*The Canyons of the Colorado Plateau.*
Sun 8	Blackwood, *Fungi*—Les Hanrahan. Members of the Castlemaine Field Naturalists Club will be joining us on this excursion.
Tues 24	Committee Meeting—Fran Hanrahan's

July

Fri 4	Greg Binns—*Honeyeaters* (Note change of speakers for June and July—Greg is shifting house on Fri 6 June and Carol kindly volunteered to swap!)
Sun 6	Linton Trust for Nature Block—Committee Members

If you can't come to our Club Excursion on Sunday ...

Sunday June 29th Field Naturalists Club of Victoria Fungi Group—Fungi Foray 10.30am Blackwood. Meet in the carpark at the Garden of St Erth in Simmonds Reef Road. Contact Arthur Carew

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Meetings are held at Ballarat Horticultural Centre, cnr. Gregory & Gillies Sts (VicRoads 254 F8) on the first Friday of the month at 7.30pm.

Excursions: Depart from Ballarat Market Place (formerly Creswick Plaza) Creswick Rd., Ballarat (VicRoads 255 M10) at 9.30am unless otherwise specified.

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